

SEE INSTRUCTIONS ON REVERSE SIDE

Section A

1. Facility name:	2. Facility identification number:
3. Stack identification number:	4. Unit identification number:
5. Control device number:	
6. Manufacturer and model number:	
7. Date of installation:	
8. Describe in detail the oxidation system. Attach a blueprint or diagram of the system.	
Attached?	

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.

Documentation is attached

Pollutant	Inlet pollutant concentration		Outlet pollutant concentration		Efficiency (%)	
	gr/acf	ppmv	gr/acf	ppmv	hood capture	pollutant destruction

10. Check one: Catalytic Thermal oxidizer

11. Discuss how the spent catalyst will be handled for reuse or disposal.

12. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system.

Please include the following:

- a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
- b. Operation variables such as temperature that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
- c. An inspection schedule and items or conditions that will be inspected. For catalytic oxidizers, discuss the replacement and/or regeneration schedule for the bed and steps you have taken to ensure the bed's proper functioning throughout its expected lifetime.
- d. A listing of materials and spare parts that will be maintained in inventory.
- e. Is this plan available for review?

Section B

The following questions must be answered by sources installing new equipment or existing Units which cannot document control efficiency of this device by other means. (Catalytic/Thermal dependent on item 10)

Catalytic oxidation	Thermal oxidation
13a. Operating temperature (°F): Max _____ Min _____	b. Operating temperature (°F): Max _____ Min _____
14a. Catalyst bed volume (ft ³):	b. Combustion chamber volume (ft ³):
15a. Gas volumetric flow rate at combustion conditions (ACFM):	b. Maximum gas velocity through the device (ft./min):
16a. Type of fuel used:	b. Type of fuel used:
17a. Maximum fuel use:	b. Maximum fuel used:
18a. Type of catalyst used and volume of catalyst used (ft ³):	
19a. Residence time (seconds):	b. Residence time (seconds):

CONTROL EQUIPMENT - CATALYTIC OR THERMAL OXIDATION -- Form 4530-113
AIR POLLUTION CONTROL PERMIT APPLICATION INSTRUCTIONS

NOTE: Use of this form is required by the Department for any air pollution control permit application filed pursuant to ss. 285.61, 285.62 or 285.66, Wis. Stats. Completion of this form is mandatory. The Department will not consider or act upon your application unless you complete and submit this application form. It is not the Department's intention to use any personally identifiable information from this form for any other purpose.

Complete one form for each control device used to reduce air pollution emissions.

- Item 1 Provide the name of the facility.
- Item 2 Provide the facility identification (FID) number that appears on the annual emission inventory reports.
- Item 3 Provide the identification number for the stack exhausting to this device. Use the same number used on form 4530-103.
- Item 4 Provide the identification number from the appropriate form(s) 4530-104, -105, -106, -107, -108, or -109 completed for the emissions unit(s) that will have its emissions reduced by this control equipment.
- Item 5 Assign an identification number to this control device (e.g., C01). Use this number when referring to this device throughout the rest of your application.
- Item 6 Indicate the equipment manufacturer and its model number.
- Item 7 Provide the installation date of this device. If this is a new device, indicate that it is new.
- Item 8 Give a complete description of the oxidation system including the type of burner, burner arrangements, type of fan, construction materials, type of heat recovery system if used, and other relevant information. Attach a blueprint or diagram of the device which clearly shows all equipment parts, including the heat recovery system, necessary for successful operation. Manufacturer's literature may be used. Attach extra information on form 4530-135.
- Item 9 For each pollutant controlled, enter the inlet pollutant concentration and outlet pollutant concentration (use the same units), hood capture efficiency, and the overall efficiency of the control device. **YOU MUST DOCUMENT** all data by stack test, manufacturer-supplied guarantees, or by other means approved by the Department. Indicate that data is attached.
- Item 10 Check the appropriate box indicating if this is a catalytic or a thermal oxidation system.
- Item 11 Discuss how collected material will be contained, transported, and ultimately disposed of. Examples of ultimate disposal include the local wastewater treatment plant or landfill. Describe any waste recycling or reuse.
- Item 12 Prepare a malfunction prevention and abatement plan according to sec. NR 439.11, Wis. Adm. Code. Please be as detailed as possible, keeping in mind that the rule contains more detail than appears at Item 12 of this form. While it is not necessary to submit this plan with the permit application, the Department may at any time request a copy of this plan from the facility.

Section B - This section must be completed by sources installing new equipment or by existing sources which cannot otherwise document the control efficiency of this device (such as with current stack test results). **IF YOU HAVE ALREADY SUBSTANTIATED THE CONTROL EFFICIENCY OF THE DEVICE AT ITEM 9 ABOVE, YOU DO NOT NEED TO COMPLETE SECTION B.**

Note: If your oxidation system is catalytic, answer only column a. If it is thermal, answer only column b.

- Item 13
 - a. Indicate the maximum and minimum temperatures in the catalyst bed (in degrees F).
 - b. Give the maximum and the minimum operating temperatures for the combustion chamber of the incinerator.
- Item 14 Give the volume of the catalyst bed or combustion chamber (in feet³).
- Item 15
 - a. Indicate the volumetric flow rate of the gas at the temperature and pressure under which combustion occurs.
 - b. Indicate the maximum gas velocity through the device at the temperature and pressure under which combustion occurs.
- Item 16 List the type of fuel (if any) that will be used in the catalytic or thermal oxidation system. If none, write "none". Indicate sulfur content for non-gaseous fuels.
- Item 17 Give the maximum hourly rate of fuel consumption for this unit (in Btu/hr).
- Item 18 Give the type of substance used as a catalyst and the volume used (in feet³).
- Item 19 Indicate the gas residence time. This is generally equal to the volume of the combustion chamber divided by the gas volumetric flow rate at combustion conditions.